#### **EXECUTIVE SUMMARY**

Date Summary Prepared: October 29, 2012

I.D. Number: M/049/0086
Date Original Notice Received: April 16, 2012
County: Utah
New/Existing: New LMO
Mineral Ownership: BLM/Fee
Surface Ownership: BLM/Fee
Lease No.(s): U-88526

Life of Mine: Five or more years

Legal Description: Portions of the South 1/2 of the Southeast 1/4 of the Southwest 1/4 of Section 22, the Southwest

1/4 of the Southwest 1/4 of the Southwest 1/4 of Section 23, the North 1/2 of the Northwest 1/4 of the Northwest 1/4 (lot # 5) of Section 26, and the Northeast 1/4 of the Northeast 1/4 of Section

27; Township 8 South, Range 1 East, SLBM, Utah County, Utah

Mineral(s) to be Mined: Limestone, aggregates

Acres to be Disturbed: 44.3 acres

Present Land Use: Grazing, wildlife habitat, mining

Postmining Land Use: Grazing, wildlife habitat

Variances from Reclamation Standards (Rule R647) Granted: No variances were requested or granted.

# Soils and Geology

Soil Description: Five soil types exist within the permit area, and all of them are well drained stony loams to very cobbly loams. A portion of the area is rock outcrop from which little soil can be salvaged. Laboratory analyses of the soils show them to be suitable for reclamation.

pH: Soil pH ranges from 7.0 to 7.6 pH units.

Special Soil Handling Problems: Salvageable soil depths range between 3" and 12". An average of 6 inches will be salvaged for use in reclamation.

Geology Description: <u>Lacustrine gravels and sand and alluvial fan deposits (upper Pleistocene) over Bingham Mine Formation and Oquirrh Group limestones (upper Pleistocene/Upper Pennsylvanian).</u>

#### **Hydrology**

Ground Water Description: There are several wells within a one-mile radius of the project. The closest well, about 2,200 feet east and about 375 feet elevation below the site, has flow from alluvium of about 0.04 gallons per minute. Most of the other wells are located along the toe of the alluvial fans at about 4,500 feet elevation. Ground water is estimated to be at 375 feet below the quarry.

Surface Water Description: The only drainage channel on the permit area is an ephemeral drainage that enters the property at the western boundary and ends shortly after entering the property. There are no other surface waters associated with the property. There are no wetlands on the property.

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Water Monitoring Plan: There are no plans to monitor surface or ground water.

### **Ecology**

Vegetation Type(s); Dominant Species: Vegetation is typical of the Great Basin shrub/steppe community.

Recent fires in the area have destroyed a majority of the community, resulting in loss of the typical shrub species and a significant increase in annual invader species. Currently, the site is dominated by cheatgrass and storksbill, but there is still a significant amount of bluebunch wheatgrass and western wheatgrass. Other desirable species noted in the vegetation survey include sand dropseed, mutton grass, rubber rabbitbrush, and gooseberryleaf globemallow. Vegetation ground cover was estimated to be 52 percent.

Wildlife Concerns: Evidence of nine species of wildlife was found during surveys of the area. The species identified were typical of arid areas that have limited resources due to low precipitation. While tracks and scat of mule deer were common, no deer were observed. Most avian species appeared to be traveling through the area versus hunting or nesting. No threatened or endangered species were observed. Consultation with the US Fish and Wildlife Resources and the Utah Division of Wildlife Resources identified four species that could potentially inhabit the area, but no individuals or potential habitats of these species were found on the site.

Surface Facilities: The only permanent facility is the scale. All other facilities at this site will be portable, or skid-mounted, including crushers, conveyors, and screens.

# Mining and Reclamation Plan Summary:

During Operations: Topsoil will be salvaged prior to mining. Unconsolidated material will be moved with dozers and processed through the crushing/screening circuit. Consolidated materials will be drilled and blasted before processing. No highwall slope will remain steeper than 2H:1V. All crushers, screens, etc., are covered under an Air Quality Approval Order with the Division of Air Quality. Fugitive dust will be controlled by water from water trucks. Processed materials will be stockpiled and loaded into delivery trucks. The processing and stockpile areas will move as the quarry advances.

After Operations: All facilities and stockpiled material will be removed from the site. Slopes will be graded to no steeper than 2H:1V. Topsoil will be applied to a depth of about six inches on graded slopes and the pit floor. Compacted areas will be ripped to a depth of 18 inches. The area will be seeded with a mix designed to provide grazing and wildlife habitat for the post mining land use.

#### Surety

Amount: \$218,396.00

Form: Surety Bond with Traveler's Casualty and Insurance Co.

Renewable Term: Five years (2017)

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